

III.—Notes, &c. on the genera of Insects *Phyllobius*, *Polydrosus* and *Metallites*. By JOHN WALTON, Esq., F.L.S.

THE insects of these genera are pre-eminently distinguished by having the body adorned with shining or brilliant scales of various shades of green, whilst others have a splendid metallic lustre of various hues; nearly all the species are subject to considerable variation in the colouring of the scales and legs.

I sent specimens of each of the following to M. Schönherr and Dr. Germar, and I have their authority for the names and synonyms referred to them.

Fam. CURCULIONIDÆ.

Genus *PHYLLOBIUS*, *Schönh.*, *Germar*; *NEMOICUS*, *Steph.*

§ A. *Femora dentate*.

1. *Phyllobius calcaratus*, Fab., *Schönh.*, *Steph. Man.* p. 249.
 — *cæsius*, Marsh.
 — *Pyri et cæsius*, *Steph. Illust.* iv. p. 147.
 — *æruiginosus et cæsius*, *Kirb. MSS.**

This insect, from its very great similitude to the following, has frequently been confounded with it, and erroneously referred by many entomologists to *Curc. Pyri* of Linnæus; but the accurate and experienced eye of Gyllenhal detected the characters by which it may be discriminated: it differs from *P. Alneti* in having the scales setaceous-lanceolate; the antennæ and its articulations longer and more slender, the scape reaching beyond the base of the head; the third and fourth joints of the funiculus distinctly longer; the thorax less impressed and constricted anteriorly; the scutellum of the form of an isosceles triangle, having the apex deeply truncated and rounded; the legs and antennæ rufous, rufo-ferruginous or rufo-castaneous, very rarely nigro-piceous. Mr. Stephens has in his cabinet a splendid series of varieties, some of which are clothed with golden or coppery-coloured scales; these he refers to *Curc. Pyri* of Linnæus, and others with green scales to *cæsius* of Marsham; I presume he now considers them as the *P. calcaratus* of his 'Manual' and of Schönherr.

Found in the south in boggy woods, and on the banks of rivers on the alder (*Alnus glutinosus*) the beginning of June; and in Yorkshire on the common birch (*Betula alba*) in similar situations: it is rather local and not frequently met with.

* It must be understood that the names of insects cited from Kirby's MSS. are verified according to his museum, although not stated; and those with a note of interrogation he refers with doubt to Marsham.

2. *Phyllobius Alneti*, Fab., Steph.

- *Pyri*, Gyll., Schönh.
- *cnides*, Marsh., Kirb. MSS.
- *angustatus*, Kirb. MSS.

Very closely allied to the preceding, from which it may be distinguished in having the scales subelliptical, the antennæ and its joints shorter and stouter, the scape scarcely reaching to the base of the head, the third and fourth joints of the funiculus distinctly shorter and stouter, the thorax broadly and deeply constricted in front; the scutellum triangular, with the apex acuminate; the legs generally black, sometimes dull rufo-ferruginous or piceous. The greater part have the scales green or bluish-green, very rarely of a brassy-copper; occasionally specimens are found of a dull ash-gray, but I have never seen one of a fiery coppery-gold.

Found abundantly upon the common stinging-nettle (*Urtica dioica*), and on *Umbelliferae* at the sides of hedges in June.

3. *P. Pyri*, Linn. (Mus. Linn.), Marsh.

- *vespertinus*, Fab., Herbst, Schönh., Kirb. MSS.
- *Mali*, Fab., Herbst, Marsh., Gyll., Steph., Kirb. MSS.
- *amaurus*, Marsh., Kirb. MSS.

This insect, which has some resemblance to the two preceding, may at once be discriminated by having the basal joints of the funiculus of the antennæ shorter and of equal length; it is variable in its habits: when found on trees the scales are commonly of a bright red copper-colour, with the legs and antennæ rufous or testaceous; and when found amongst grass the scales are of a silvery-gray, with the femora black at the apex, and the tibiæ and antennæ piceous or dull testaceous.

Considerable doubt and confusion have hitherto existed relative to the identity of *Curc. Pyri* of Linnæus, but the Linnæan cabinet and his description prove decisively that that name must inevitably be applied to this insect, and not to the preceding, with which the description does not agree. In the Linnæan museum there are two insects pinned to the name "*Pyri*," clothed with golden coppery scales of a fiery-red, and the legs and antennæ rufescent; the first on the left is *Curc. micans* of Fab., having the femora simple; the second on the right is *Curc. Mali* of Fab., with the femora distinctly dentate. Linnæus has thus clearly mixed two species, but from the peculiar colour of their scales ("*aureo-igneus*"), and the colour of their legs and antennæ ("*rufescentes*"), it is evident he had these two insects in his eye when he described his *Curc. Pyri*, and the term "*femoribus dentatis*" of his description decides unequivocally to which insect the name should be applied; the first, being larger and more shining, he supposed was the female. Donovan and Marsham

have also mixed the two species; the former has figured *Curc. micans* and described the “*thighs dentated!*”—the latter refers to Donovan and has copied the description of Linnæus. Stephens, in his ‘Syst. Catal.’ refers *Curc. Pyri* of Donovan and Marsham to *Curc. micans*; but Kirby in his manuscript, although he also refers it to the same species, has placed a note of doubt—“*an Marshami?*” *Curc. amaurus* of Marsham, according to a specimen in the Kirbian collection, and which agrees with Marsham’s description, is certainly a variety of this insect with silvery-gray scales, and the apical half of the femora black.

Abundant on oaks and other trees in or near woods, and sometimes amongst grass in June.

4. *Phyllobius argentatus* of authors.

Curc. argentatus, Linn., Mus. Linn.

P. flavidus et femoralis, Kirb. MSS.

This insect, although very liable to be confounded with the following, is readily distinguished from it, by having the eyes less prominent, the rostrum shorter, the antennæ entirely rufous or testaceous, with the basal joints of the funiculus unequal, the second joint being distinctly more slender and longer than the first; the legs rufous or testaceous, the femora sometimes piceous or black: the form of the thorax varies considerably in this and the succeeding species from subcylindrical to subglobose, with intervening forms, and the femora of some individuals are more robust—hence the name *femoralis* of Kirby; these however are only regarded as sexual disparities, and are all referred to this inconstant species.

Abundant throughout the country from May to August.

5. *P. maculicornis*, Germ., Gyll., Steph., Schönh.

—*nigripes et angustior*, Kirb. MSS.

This differs from *P. argentatus* in having the head depressed in front, the eyes distinctly more prominent; the rostrum longer and dilated at the apex, elevated and deeply furrowed above; the antennæ testaceous, with the apex of the scape piceous and the clava fuscous, the basal joints of the funiculus of equal length; the legs black; the tibiæ and tarsi sometimes obscure testaceous.

Rather rare in the south of England; I have found it in meadows at Mickleham and at Birch Wood in June, and abundantly in Yorkshire amongst grass on the magnesian limestone.

6. *P. oblongus* of authors.

Curc. oblongus, Linn., Mus. Linn.

—*rufescens*, Marsh., Kirb. MSS.

—*testaceus*, Kirb. MSS.

Nemoicus oblongus, Steph.

Some examples of this insect have the head and thorax entirely black, and others rufo-ferruginous.

I think there is too close a resemblance in general habit and affinity, as well as in the form of the head, and the analogous construction of the antennæ, between this and the insects of the present genus, to admit of a generic separation; it is therefore located here, in accordance with the views of Schönherr, followed by the continental entomologists.

Rather common in woods and hedges from May to July.

§ B. *Femora simple.*

7. *Phyllobius Pomonæ*, Oliv., Germ., Steph.
 — *uniformis* et *albidus*, Steph.
 — *obscurior*, Kirb. MSS.

M. Schönherr informed me that he considered this insect as not sufficiently distinct from the following, and quoted from a letter the opinion of Germar, that *Pomonæ* and *uniformis* were the same species; this I communicated to Germar, and he having previously received from me many specimens of both, remarked—“*Phyll. Pomonæ*, Germ., without doubt; I am of your opinion that it may be different from *uniformis*.” the two species are extremely alike, but they are different in their habits, and I have never taken them in company; they may also be separated by habit; I have therefore always regarded them as distinct species. The differences of form and sculpture are not very apparent, unless the extreme varieties of each species are contrasted; the shape of the thorax is more uniform or less variable than in *uniformis*, and it is comparatively longer and narrower in proportion to the breadth, less dilated at the sides, flatter above, and sometimes carinated in the middle; the elytra are also longer and narrower in proportion to the breadth, and somewhat different in form: but it is immediately distinguished by always having the breast and abdomen more or less densely clothed with scales, whilst *uniformis* has the same parts sparingly covered with fine short hairs; both species are exceedingly variable in size and in the colour of the parts of the legs and antennæ.

Very abundant amongst grass in Hackney marshes and in Yorkshire the latter end of June; but never, according to my experience, on trees.

8. *P. uniformis*, Marsh., Kirb. MSS., Schönh.
 — *parvulus*, Gyll., Steph. (non Fab. secund. Germ. et Schönh.).
 — *minutus*, Steph.
 — *Pomonæ*, Schönh. Supp. vii. p. 35.

This insect generally has the thorax shorter in proportion to the length than the preceding, more dilated at the sides, and more convex above, with a tendency (like *P. argentatus*) to the

subglobose form ; the elytra are likewise shorter in proportion to the breadth, the base elevated and slightly straightened behind the shoulders. I think that Mr. Stephens has not a typical specimen of *Curc. uniformis* of Marsham, but the examples in Kirby's MSS. and museum which he refers to Marsham agree with this species.

Found very abundantly in hedges on the black-thorn and on *Umbelliferae* from May to July.

9. *Phyllobius viridicollis*, Fab., Gyll., Steph., Schönh.

The form of almost every organ of this insect is extremely similar to the preceding ; but it differs in having the scales elliptic-lanceolate ; the head and thorax coarsely rugose-punctate, the latter glabrous above, and sprinkled with green scales at the sides ; the elytra nearly glabrous.

I have received numerous specimens from Mr. R. N. Greville, found in the neighbourhood of Edinburgh, and Dr. Greville informs me, that it is in some years so abundant that a dozen specimens may be taken with one grasp of the hand on *Alchemilla vulgaris* ; in Sweden, according to Gyllenhal, it inhabits *Artemisia campestris*.

Genus POLYDROSUS, Germ., Schönh.

§ A. *Femora simple*.

1. *Polydrosus undatus*, Fab., Gyll., Germ., Steph., Schönh.

— *fulvicornis*, Steph.

Curc. selenius, Marsh., Kirb. MSS.

— *rufipes*, Linn., Mus. Linn.

Curc. fulvicornis, Fab. and Gyll., is nearly allied to this insect, from which, however, it may be instantly known by having, independent of other characters, the head black, the rostrum, thorax and elytra ferruginous or rufo-castaneous. There are two authentic examples of *Curc. fulvicornis* in the collection of Kirby from Gyllenhal, and I possess several foreign specimens with that name from the collection of Billberg. *P. fulvicornis* of Stephens is, according to the two insects in his cabinet, a variety of *P. undatus*. I have never seen a British specimen of *Curc. fulvicornis* of Fabricius. Dr. Germar has recorded his opinion*, that the description of *Curc. rufipes* by Linnæus does not at all agree with this species.

Common on the oak underwood in the woods of Kent and Surrey in June.

* Ent. Zeit. Stettin, no. 5. p. 99, 1842.

2. *Polydrosus micans*, Fab., Herbst, Gyll., Germ., Steph., Schönh.
— *Pyri*, Linn., Mus. Linn., Kirb. MSS. ?

The general colour of the scales of this insect are of a coppery fiery-red.

Not frequently met with. I have taken it in Swanscombe Wood, near Gravesend, on the oak underwood in June.

3. *P. flavipes*, DeGeer, Gyll., Steph., Schönh.

Major Gyllenhal has described this insect with his accustomed accuracy and precision, and Mr. Stephens has given shorter descriptions in his 'Illustrations' and in his 'Manual of British Coleoptera'; but from its near affinity to *P. pterygomalis*, it has hitherto been confounded by British entomologists with that species; it differs principally in being clothed with fuscous hairs, the abdomen with scales, and in being distinctly different in the form of the head. I have specimens of *P. impressifrons* from Chevrolat, which is decidedly more closely allied to this species than *P. pterygomalis*, and with much difficulty distinguished from *P. flavipes*; yet I am satisfied it is sufficiently distinct; it differs chiefly in having the head narrower, the vertex less convex and slightly dilated behind the eyes, the frons very deeply impressed, the eyes less prominent, the rostrum elevated at the sides and much depressed above; the thorax flat above, with a deep oblong impression on each side behind the middle, and very sparingly clothed with shorter hairs.

Of *P. impressifrons* and *P. flavovirens* of Schönherr and of Stephens's 'Manual,' I have never seen indigenous specimens.

In the cabinets of Mr. Waterhouse, Mr. S. Stevens and myself.

Taken in Windsor and Henhault Forests, and also near Hammersmith Bridge, by Mr. S. Stevens, by brushing amongst grass the beginning of June: rather local and not frequently met with.

4. *P. pterygomalis*, Schönh. Supp.

— *flavipes*, Marsh., Kirb. MSS.

Oblong, black, clothed with brilliant green scales sometimes of a shining golden colour, and with erect pallid hairs. Head broad, the vertex transversely elevated and very distinctly carinated on both sides, narrowed at the base and thickly punctulated; eyes round and prominent, black; rostrum very short, scarcely half the length of the head and nearly as broad, the apex testaceous and emarginated. Antennæ reaching beyond the base of the thorax pallid testaceous, pubescent; clava oblong, acuminate. Thorax rather broader than long, narrowed and constricted anteriorly, moderately rounded at the sides, transversely convex in the middle, closely and thickly but not deeply punctulated, the punctures confluent. Scutellum triangular.

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Elytra oblong, with the shoulders rounded, convex above, punctate-striate, the interstices rather convex, minutely granulated; the abdomen black, sparingly clothed with fine short hairs, but without scales. Legs moderate, pallid testaceous, pubescent; femora clavate. Length 2—2½ lines.

This insect is dissimilar in its habits from the preceding; it is generally less, more slender, the scales more brilliant, the hairs on the body paler, and the abdomen without scales; the shape of the head is very different, being shorter and narrower at the base, the vertex transversely elevated and very distinctly carinated on both sides; the thorax also differs, but the above characters are sufficient to distinguish it from its congeners.

In many cabinets, but referred to *P. flavipes*.

Not very common, but occasionally found rather plentiful in woods on the birch, hazel, and other trees in June.

5. *Polydrosus sericeus*, Schall., Gyll., Schönh.

— *splendidus*, Herbst.

— *squamosus*, Germ.

— *speciosus*, Steph., Curt.

I possess foreign specimens of this beautiful insect from Germany, with the name "*Polydrosus sericeus* of Schaller."

It was discovered by the Rev. G. T. Rudd in a wood near Kimpton, Hants, in June, and as far as I know, has not hitherto been found in any other locality; it appears to be extremely local.

§ B. *Femora dentate*.

6. *P. planifrons* (Dej. Cat.), Schönh.

— *argentatus*, Oliv.

Oblong, black, densely clothed throughout (except the tarsi and antennæ) with rich green scales, the upper surface without hairs. Head rather large, subquadrate, closely punctulated, the frons more or less depressed, with a deep fovea in the middle; rostrum a little shorter and narrower than the head, the apex triangularly emarginated. Antennæ reaching to the base of the thorax, slender, the joints rufous or testaceous, with their apices piceous and the clava fuscous. Thorax short, transverse, a little narrowed and slightly constricted anteriorly, the sides moderately dilated and rounded, and nearly plane above. Elytra with the shoulders elevated, subrectangular, convex above, punctate-striate, the interstices broad and flat, and transversely strigated. Legs rather stout; the femora and tibiæ black, the former denticulated; the tarsi rufous. Length 3 lines.

There is a specimen of this insect in the cabinet of the British Museum, but I cannot learn where it was taken. I possess foreign examples from Chevrolat.

7. *Polydrosus Chrysomela*, Oliv., Schönh. Supp. vi. p. 447, Germ.
 — *sericeus*, Steph., Curt., non Schaller.
 — *pulchellus*, Steph. Manual, p. 249.

In my long series of varieties of this insect I have recent specimens clothed with shining green scales, some golden-yellow or coppery-red, and others of a silvery-gray; older specimens are found with the scales more or less abraded, and the colour of the legs obscure testaceous, and sometimes the femora are piceous: the form of the elytra varies very remarkably; some are considerably narrowed, and the sides nearly straight, whilst others are much broader, having the sides regularly dilated and rounded from the shoulders to the apices, and very convex above; the second and sixth interstices from the suture on each elytron are more or less distinctly lineated, in consequence of being more densely clothed with paler scales than the others.

Specimens which I sent to Germar were referred to "*P. Chrysomela*, Oliv., Schönh." *P. sericeus* of Stephens and Curtis (according to the insects in their cabinets) is beyond all doubt identical with this species, and it is my opinion that *P. pulchellus* of Stephens (represented in his cabinet by one insect) is but a narrow variety with "*golden griseous scales*."

Apparently a littoral or subarctic insect: I have taken it on grassy banks, just above high-water mark, on the shores of the Thames below Gravesend, and at Burnham, on the coast of the Bristol Channel, the beginning of June.

8. *P. confluens* (Kirb. MSS.), Steph. Illust. (1831).
 — *amaurus*, Steph.
 — *Chrysomela*, Schönh. ii. (1834), Steph. Manual (1839).
 — *perplexus* (Dej. Cat.), Schönh. Supp. vi. (1840).

Mr. Stephens appears to be the first author who described this insect, since which he refers it in his 'Manual of British Coleoptera' to *Chrysomela* of Olivier after Schönherr; subsequently Schönherr, in his Supplement, changed the name for *perplexus* of Dejean Catal., and upon the authority of Schuppel, applies *Chrysomela* to the preceding species.

I possess two foreign insects from Chevrolat, with the name *perplexus* of Dejean, which are identical with the *confluens* of Kirby.

I have taken this insect rather plentifully near Lyndhurst, Hants, and also on the south side of Windmill Hill near Gravesend, and in other places, always on the furze (*Ulex europæus*), in July: on broom at Plumstead, Charlton and Weybridge from June to September, Mr. S. Stevens.

9. *Polydrosus cervinus*, Linn., Marsh., Gyll., Germ., Steph., Schönh.— *melanotus*, Kirb. MSS., Steph.

Curc. melanotus of Kirby, according to his collection, is a small green variety of this insect, with the legs black and the tarsi dull piceous; the scales on the upper surface are abraded.

This is a common and well-known insect, and found abundantly on the young shoots of the oak and birch in woods during the months of May and June.

GENUS METALLITES, Schönh., Germ., Latr.

“*Gen. Char.*—Antennæ somewhat short and stout; the scape clavate, slightly curved, overhanging the eyes; the basal joints of the funiculus rather long obconic, the rest nodose; the club oblong-ovate, acuminate. Rostrum short, narrower than the head, somewhat flat above, parallelopiped. Eyes small, rounded, rather prominent. Thorax either subtransverse or oblong, the base and apex truncated, moderately rounded at the sides, a little narrowest in front. Elytra oblong, suboval, their base when united subemarginate, the shoulders either obtusely angular or slightly rounded; a little convex above. Legs nearly equal; thighs toothed or simple.

“*Obs.*—Body oblong, scaly, furnished with wings; of small size. Allied to the genus *Polydrosus*, but differing in the structure of the rostrum and antennæ.”—*Extracted from Schönherr.*

This genus was established by Schönherr, and subsequently adopted by Germar and Latreille; at present it contains eight European species, one of which inhabits this country. I possess foreign specimens of *Metallites mollis* of Germ., and *M. atomarius* of Oliv., presented to me by Dr. Germar.

These insects differ from those of the genus *Polydrosus* in having the antennæ and its articulations considerably shorter, more robust, and of a dissimilar form; the eyes smaller, and the thorax elongate.

1. *Metallites marginatus*, Steph.— *ambiguus*, Schönh.

Birch Wood was for some years the only known locality for this insect, where it is found abundantly on the juniper and other plants in May and June; but the zeal and industry of Mr. S. Stevens discovered it in Windsor Forest and Black Park near Uxbridge, on the young shoots of the birch, oak, &c.